REMARKS

Applicant respectfully requests further examination and reconsideration in view of the above amendments and the arguments set forth below. In the Office Action mailed July 31, 2007, claims 1-4, 6-29 and 31 have been rejected. In response, the Applicant has amended claims 1, 6, 10, 20 and 25, cancelled claim 26 and submitted the following remarks. Accordingly, claims 1-4, 6-25, 27-29 and 31 are still pending. Favorable reconsideration is respectfully requested in view of the amended claims and the remarks below.

Examiner Interview Summary

On Wednesday, August 17, 2007, Examiner Michelle Le, Supervisory Examiner Luke Gilligan, Inventor Ian Rowlandson, and Attorney Christopher M. Scherer conducted a telephone interview. The Applicant wishes to thank the Examiners for their kind attention and willingness to discuss the Office Action. Specifically, the parties discussed the rejection under 35 U.S.C. §103(a) of claim 1 and the cited Selvester and Selker references. While no agreement was reached, the Examiners indicated that there may be aspects of the invention that are patentable over the prior art. The above amendments are made in response to the Examiners' suggestions.

Rejections Under 35 U.S.C. §103

Claims 1-4, 6-29 and 31 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,230,048 to Selvester et al (hereinafter Selvester), in view of U.S. Patent No. 5,277,188 to Selker (hereinafter Selker). The Applicant respectfully disagrees with this rejection.

In contrast to the teachings of Selvester, Selker, and their combination, the method and system of the present invention interprets and matches by measuring the collected physiological data, analyzing numerous characteristics such as wave form height, distance between peaks, and extracting various features of the wave form. The interpretation module then uses the measured features to generate a separate interpretation of the physiological data [present invention, page 5, lines 19-28]. The present invention does not merely create a wave

form, but rather extracts features of the waveform to be compared and matched with records in a previously established feature set library.

Selvester teaches a computer-based electrocardio interpretation system and method wherein subject specific ECG data is interpreted in accordance with a set of interpretation rules to identify the presence, and certain characteristics, of various selected heart conditions. Selvester also does not teach utilizing an interpretation module **to generate a separate interpretation** of the physiological data collected from the patient. The Selvester reference is focused on generating an interactive display based on computerized ECG. The Selvester reference first assumes that the computerized ECG has information that needs to be visualized as a pictorial image of the heart. The user can then interact with this pictorial to add more information or to consider information linked to this image.

Within the Office Action it is stated that the Selvester reference teaches comparing the separating interpretation from the physiological data to a set of known patterns in column 16, lines 14-21. However, the Selvester reference indicates in column 15, lines 22-26, that "...what is shown in Figure 5c illustrates a way of generating the various rule sets that are contained within block 50 (Figure 4). The rule creation process is now described in relation to creating a single rule set (score card), and is as follows..." In short, referring to the abstract, the Selvester reference includes interpreting subject specific ECG data in accordance with a set of interpretation rules to identify the presence, and certain characteristics, of various selected heart conditions. The passages in column 15 and 16 simply teach the method of generating these rule sets, but do not teach correlating separate interpretations of ECG data to one or more of physiological data records in a library of the same.

Within the Office Action, it is stated that the Selvester reference does not expressly teach the interpreting, measuring, analyzing, extracting and comparing steps of the present application, but that these features are well known in the art as evidenced by Selker. It is stated within the Office Action that the Selker reference teaches an ECG waveform being processed by a waveform analyzer with identifies and quantifies important characteristics and features, the output of the waveform analyzer passed on to a predicted instrument, and noting

that the Examiner interprets the "output of the waveform analyzer" to be a "separate interpretation." However, as was discussed in the interview, and further argued here in the Office Action response, Selker does not actually teach extracting feature sets from physiological data, and comparing and matching the same to a record in the feature set library, and retrieving one or more physiological data records in the library physiological data records according to the matching step.

As stated previously, the method and system of the present invention interprets sets by measuring the collected physiological data, and extracting various feature of the waveform. The invention then matches these extracted feature sets from previously interpreted physiological data. The present invention starts with the premise of not trusting the computerized ECG interpretation, and rather finds an ECG that matches the acquired ECG from a set of ECGs in an expert library. If there is a match, then the documentation associated with that match is followed. The teachings of the Selvester and Selker references simply analyze a set of ECG data in accordance with a set of rules.

The amended independent claim 1 is a method of providing real-time decision support in the review of physiological data, the method comprising: establishing a feature set library including a plurality of feature sets extracted from a plurality of physiological data records, wherein each of the plurality of physiological data records includes a corresponding interpretation; gathering the physiological data; interpreting the physiological data based on a predetermined set of criteria such that a separate interpretation of the physiological data is generated, wherein the interpreting step includes: measuring the physiological data; analyzing a set of characteristics associated with the physiological data; extracting a feature set from the physiological data to generate the separate interpretation; and matching the separate interpretation from the physiological data to a record in the feature set library; retrieving one or more of the physiological data records in the library of physiological data records according to the matching step; and displaying the separate interpretation and the retrieved physiological data records on a display. As discussed above, neither Selvester, Selker, nor their combination teach comparing the separate interpretation from the physiological data to a set of known feature sets from the feature set library, matching the

separate interpretation to one or more of the feature set in the feature set library. For at least these reasons, claim 1 is allowable over the teachings of Selvester, Selker and their combination.

Claims 2-4 and 6-9 are all dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Selvester, Selker, and their combination. Accordingly, the dependent claims 2-4 and 6-9 are all also allowable as being dependent upon an allowable base claim.

The amended independent claim 10 is directed to a physiological data interpretation system comprising: a library of physiological data records; a physiological data acquisition device capable of acquiring physiological data and coupled to the library of feature sets extracted from a plurality of physiological data records, wherein each of the plurality of physiological data records includes a corresponding interpretation, the acquisition device having an interpretation module to generate a separate interpretation of the physiological data and a correlation module to match the separate interpretation to the records in the feature set library of physiological records and retrieve a set of physiological data records according to the match made by the correlation module, wherein the interpretation module is configured to measure the physiological data, analyze a set of characteristics associated with the physiological data, and extract one or more feature sets from the physiological data to generate the separate interpretation; and an output device coupled to the acquisition device configured to display the separate interpretation and the retrieved set of physiological data records. As discussed above, neither Selvester, Selker, nor their combinations teach a correlation module configured to match. For at least these reasons, the independent claim 10 is allowable over the teachings of Selvester, Selker, and their combination.

Claims 11-24 are dependent upon the independent claim 10. As discussed above, the independent claim 10 is allowable over the teachings of Selvester, Selker, and their combination. Accordingly, the dependent claims 11-24 are all also allowable as being dependent upon an allowable base claim.

The amended independent claim 25 is directed to a method of interpreting physiological data. The Applicant respectfully submits that the independent claim 25 is
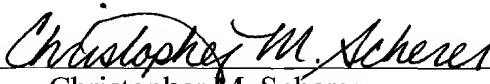
allowable for substantially the same reasons as the independent claim 1 is allowable as discussed above. Claims 27-29 and 31 are all dependent upon the independent claim 25. As discussed above, the independent claim 25 is allowable over the teachings of Selvester, Selker, and their combination. Accordingly, the dependent claims 27-29 and 31 are all allowable as being dependent upon an allowable base claim. Claim 26 has been cancelled.

For the reasons given above, Applicant respectfully submits that the claims are now in condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP

By: _Christopher M. Scherer_

Christopher M. Scherer
Reg. No. 50,655

Andrus, Sceales, Starke & Sawall, LLP
100 East Wisconsin Avenue, Suite 1100
Milwaukee, Wisconsin 53202
Telephone: (414) 271-7590
Facsimile: (414) 271-5770